

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

ATECH-SEH Metal Fabricators

New York Manufacturing Extension Partnership

Atech-She Metal Fabricators Becomes More Competitive Using Lean Techniques

Client Profile:

ATECH-SHE Metal Fabricators, located in Buffalo, New York, is a contract manufacturer of a wide range of metal components and assemblies, primarily in the telecommunications and electronics industries. The company sells to a diverse customer base, much of which is located in the western U.S.; annual sales are estimated at about \$3 million. Founded in 1968, the company has been under its present ownership for over four years. Manufacturing operations are conducted within a facility of approximately 15,000 square feet on a one-shift basis. The company currently employs 17 people, including union production workers.

Situation:

ATECH-SHE's lead times from order receipt to shipment ran at least four weeks and raw and in-process inventories exceeded \$200,000. ATECH-SHE realized that in order to remain competitive, especially in the face of an economic downturn, the focus and culture of the company needed to change. ATECH-SHE's president attended a Lean 101 training class hosted by the Western New York Technology Development Center (TDC), a NIST MEP network affiliate and division of the New York Manufacturing Extension Partnership, and immediately realized that adopting a lean methodology was the change his organization needed to make to improve competitiveness. ATECH-SHE asked TDC to help it employ lean practices to reduce lead-time, cut inventory levels and, most importantly, improve responsiveness to changing customer demands.

Solution:

TDC worked with a team of ATECH-SHE leaders to analyze the company's existing product flow, labor content, and order planning/scheduling mechanisms. The analysis determined that there were significantly more open orders on the shop floor than the available equipment and personnel could process in any reasonable period of time. Shifting priorities, late deliveries, and a substantial number of customer order status inquiries contributed to the evolution of ineffective work practices. Two members of the team--both shop floor supervisors--attended TDC's Lean 101 workshop to acquire foundation skills in lean concepts.

ATECH-SHE's modern layout incorporated several pieces of new equipment designed to support increased production requirements and improve first-time quality of all manufactured cabinets. TDC introduced the concept of continuous flow to

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integrate every step of the manufacturing process, resulting in reduced manufacturing lead-time. TDC also used cellular flow concepts to reorganize departments based on product families.

The team decided to implement the use of a pull/kanban signaling system to control the flow of orders and material through the shop, and optimize the utilization of equipment and operators. By limiting the number of new orders in process on the shop floor and reducing the amount of material cut per release, the team improved in-process order throughput by almost 200 percent. Now orders can be re-prioritized at any time, up to the point where the material has been cut. ATECH-SHE's president also proclaimed that once material for an order is cut and in process, it must be completed without interruption.

Finally, the team implemented a company-wide 5S workplace organization initiative. Employees spent half a day removing clutter, identifying and isolating in-process material not required for the current orders, and creating specific material "drop points" for each work center. As a result, ATECH-SHE recovered a substantial amount of floor space in the existing facility that can be used to house new equipment or expand production capacity.

Results:

Reduced front-office order processing by 50 percent.

Improved order throughput by 200 percent.

Realized a 24 percent improvement in the ratio of dollars shipped per direct labor hour.

Reduced in-process inventories by 22 percent.

Increased inventory turns by 250 percent.

Created corporate culture centered around philosophy of continuous improvement.

Cross-trained production employees to alleviate operator capacity constraints.

Now planning to further reduce set-up times and incorporate visual tool management.

Testimonial:

"We are a small company needing to improve, but did not know how to begin. Western New York Technology Development Center helped us develop a clear and unbiased view of our strengths and weaknesses. Together we began a series of small steps all pointed towards permanent improvement. The positive changes were immediate. TDC has become a cost-effective member of our management team. We expect to continue to seek and benefit from their input."

David Munschauer, President